

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

**IN RE APPLICATION OF:**

Mattlage, et al.

**SERIAL NO.:** 10/733,897

**FILED:** 12/10/2003

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**EXAMINER:** Ark, Darren

**GROUP ART UNIT:** 3643

**TITLE:** IMPROVED FISHING HOOK

MAIL STOP NON-FEE AMENDMENT

COMMISSIONER FOR PATENTS

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**RESPONSE TO APRIL 2, 2007 OFFICE ACTION**

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Dear Examiner:

Applicant is in receipt of the Office Action dated April 2, 2007 concerning the above-referenced application. Please see the remarks section beginning on Page 2.

### REMARKS

In response to the Office Action dated April 2, 2007, please consider the following remarks made in a good faith attempt to move prosecution of this application forward to a proper allowance of the claims.

Please note that claims 1-3 and 5-6 have been canceled. Pursuant to an Office Action dated March 14, 2007 and in accordance with a restriction requirement contained therein, Claim 9 became a non-elected claim and has been withdrawn from this application. Claims 4 and 7-8 have not been amended, but for the reasons set forth below, are believed to be in condition for allowance.

#### **Response to Claim Rejections under 35 USC § 102**

Claims 4, 7 and 8 currently stand rejected under 35 USC 102(b) as being anticipated by Furuta (4,953,321) and Furuta (4,928,423) (sometimes collectively referred to as "Furuta"). Applicant asserts that such rejection is improper because the rejection too broadly construes the Furuta teachings without considering an essential limitation to the Furuta disclosure not contained within the present invention. The Furuta patents disclose an end product (a fishing hook) formed by chemical vapor deposition, which Applicant believes to be not only a process limitation, but also a structural limitation. The inner surface disclosed in Furuta is steel. At the high temperatures disclosed in Furuta, those skilled in the art understand that steel sensitizes, which changes the mechanical properties and the viability of steel, including its ductility, hardness, yield strength and impact resistance. After heating, the core material of the Furuta patents (steel) typically suffers from deficiencies such as instability, intergranular corrosion and stress corrosion cracking. The core material of the present invention does not suffer from these structural limitations

imposed by chemical vapor deposition because physical vapor deposition does not involve the application of titanium at similarly high temperatures.

Claim 4 of the present invention positively recites the required limitation that the titanium alloy be deposited onto the core material via physical vapor deposition. The physical vapor deposition technique does not alter the core material's final properties as does the chemical vapor deposition method on the fishing hook taught and claimed by Furuta. Furuta '321, column 4, lines 53-55; Furuta '423, column 4, lines 1-5. In addition, the physical vapor deposition process provides a far superior adhesion of the titanium to the fishing hook than that of other methods, including chemical vapor deposition.

Consequently, the structural characteristics of Furuta's fishing hook exhibit unexpected properties from those of the fishing hook of the present invention. The structural deficiencies in the fishing hook attributable to the higher temperatures as taught by Furuta do not exist in the disclosure of the present invention.

Additionally, with regard to claims 7 and 8, Applicant respectfully disagrees with the rejection that Furuta discloses the surface layer comprises of a titanium alloy wherein the titanium alloy has a richer portion of titanium at the inner surface than at the outer surface. In contrast, the fishing hook coated with chemical vapor deposition, as taught in Furuta, makes no mention of producing a fishing hook with controlled richer titanium near the core and richer non-metallic material near the surface. The Office Action even acknowledges this non-disclosure on page 3, paragraph 6 and page 4, paragraph 7 under alternative 103(a) rejection arguments.

For these reasons, the physical vapor deposition process disclosed in the application of the present invention is significantly different than the chemical vapor deposition of applying a coating to a fishing hook as taught in Furuta. Therefore, because the

aforementioned essential elements and limitations of the claims in the present invention are not disclosed in the prior art cited, claims 4, 7 and 8 are not anticipated by either Furuta '321 or '423.

#### **Response to Claim Rejections under 35 USC § 103**

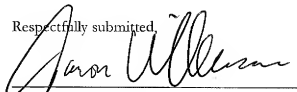
Claims 7 and 8 currently stand rejected under 35 USC § 103(a) as unpatentable over Furuta '321 and '423 (collectively referred to as "Furuta") in view of Bergman et al. (4,448,799). Applicant asserts that these rejections are improper because neither Furuta nor Bergman, either alone or in combination, teach, disclose or suggest each and every element of the present invention. Furuta fails to disclose that the titanium alloy has a richer portion of titanium at the inner surface than at the outer surface. In addition, Furuta also fails to disclose the present invention's required limitation of the titanium alloy's deposit onto the core member via physical vapor deposition. As stated above, persons of ordinary skill in the art will understand that the physical vapor deposition coating process disclosed by the present invention provides and maintains a fishing hook with superior adhesion, superior anti-corrosive and superior core material properties to those fishing hooks coated using the chemical vapor deposition coating process taught by Furuta. Further, Bergman et al. does not disclose that the titanium percentage of the deposited layer be richer at the surface of the core material than at the surface of the fishing hook exposed to atmosphere. Consequently, neither Furuta nor Bergman et al., either alone or in combination, teach, disclose or suggest each and every element of the present invention. Assuming, arguendo, that Bergman et al. stands for the position taken on page 4 of the Office Action, it would not be obvious to a person of ordinary skill in the art to modify the fishing hook of Furuta such that the titanium alloy has a richer portion of titanium at the inner surface than at the outer surface in view of

Bergman et al. because Applicant has shown that the fishing hook disclosed by the present invention was not taught by Furuta '321 or Furuta '423.

Applicant respectfully submits, that in view of the preceding, Claims 4, 7 and 8 are in condition for allowance. Reconsideration and withdrawal of the rejections are hereby requested, and allowance of Claims 4, 7 and 8 at an early date is solicited. If impediments to allowance of the claims remain and a telephone conference between the undersigned and the Examiner would help remove such impediments in the opinion of the Examiner, a telephone conference is respectfully requested.

Date: July 2, 2007

Respectfully submitted,



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CERTIFICATE OF FILING

I hereby certify that this correspondence is being filed with the United States Patent and Trademark Office via EFS-WEB on this 2<sup>nd</sup> day of July, 2007.



Aaron M. Wilkerson